



Operating Manual

Model 910
Shockless AC Eliminator

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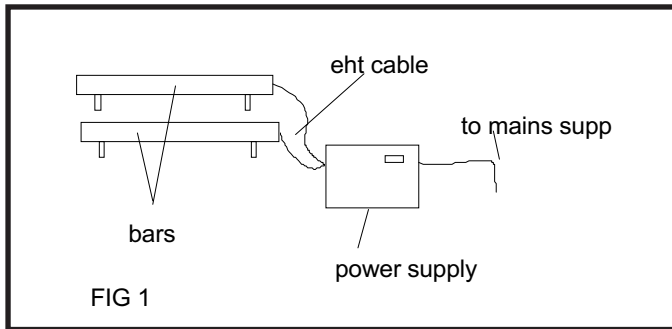
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Introduction

The Meech 910 Bar is a powerful static eliminator which is completely shockless in operation and which will give many years of excellent service, provided that the following instructions are observed closely.

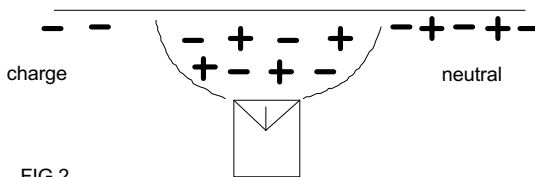
General Notes On Operation

The typical Meech 910 installation consists of one or more bars connected to a Meech Power Unit.



The Power Unit converts the primary electricity supply into a high voltage, low amperage output. This output energy is transferred to the Meech bar by the HT cable. A capacitive coupling inside the bar reduces the energy at the ionising pin to a level which is completely shockproof to a human being.

The stainless steel pins on the bar emit the energy to form an ionised air corona. When a statically charged object passes through this corona the free moving ions are attracted to the opposite charge on the object. In this way the static electricity is neutralised. Unused ions in the corona recombine or are discharged to earth.

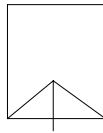


Installation of RML Bars

Correct positioning of the bar(s) is vital to efficient operation. The general rule is that they should be positioned immediately before the problem area, remembering that subsequent passage of the material over rollers, or friction, can regenerate the static charge.

The following rules should be observed closely:

1. The optimal distance from material to be neutralised.

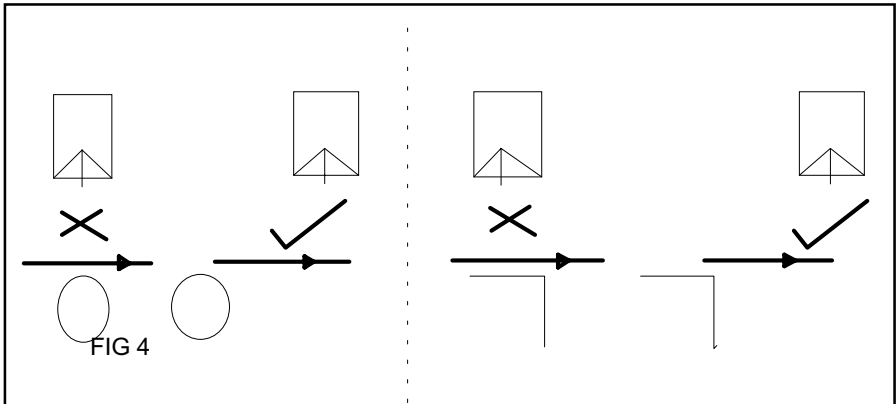


15 mm air gap

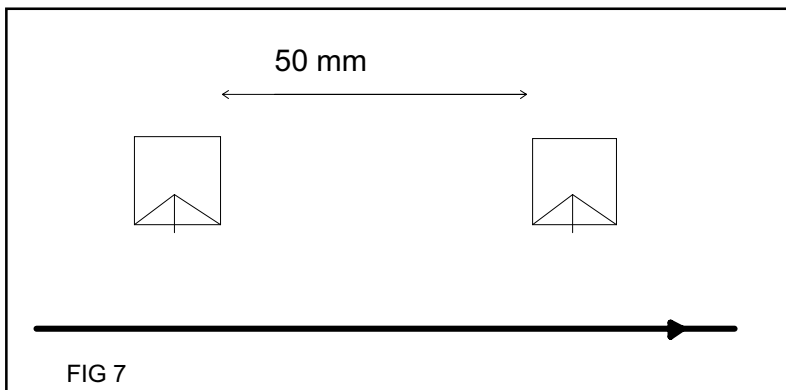


FIG3

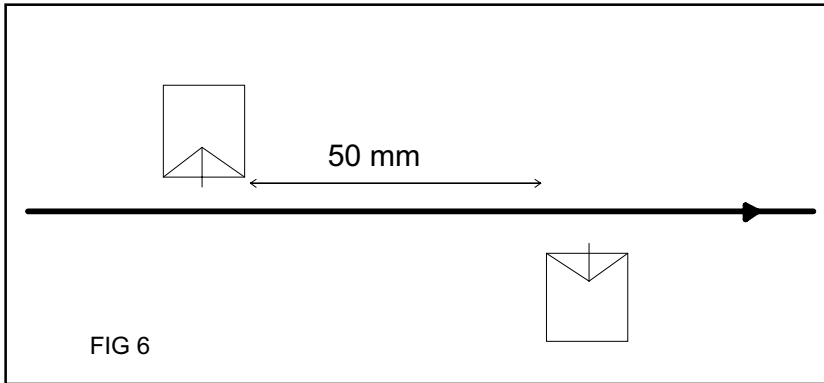
2. Free space is needed on opposite side of material, not a roller or solid object.



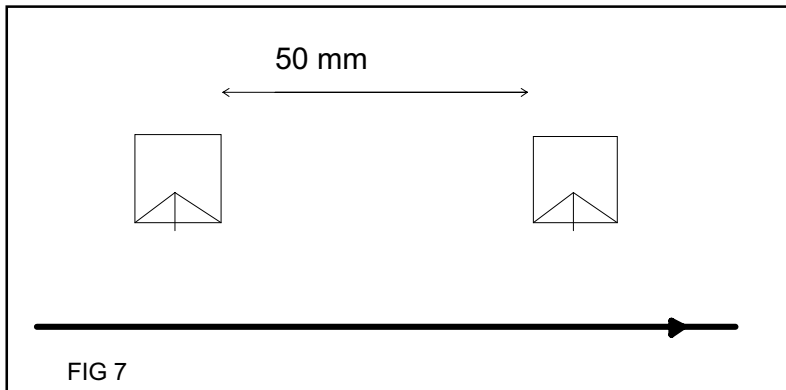
3. Avoid proximity to earthed parts of machine as this will distort the corona and reduce its efficiency.



4. If bars are needed on each side of the material, they should be staggered.



5. If more than one bar is needed on the same side, they should be spaced apart.



6. Two steel fixing strips are supplied with each bar for ease of installation. The bars must be earthed for correct operation. If in any doubt run an earth wire from the bar to the earth stud on Power Unit.

Maximum operating temperature 85 degrees C.

Technical Characteristics

Operating voltage	: 7 kV
Pin energy	: 0.15 millijoules
Max Temp	: 85 deg. C
Length	: 80 to 4000mm in 20 mm steps. Effective length is 40 to 60 mm less than the effective length.
Cable	: 2m of screened HT cable as standard, longer lengths can be specified when ordering.
Weight	: 750g per meter approx.
Construction	: Anodised aluminium extrusion with stainless steel emitter pins moulded in polypropylene.
Mounting	: M4 x 20mm studs as standard, others available.
Operating range	: 15 - 30mm

Maintenance

Ionisers require periodic cleaning. During normal operation, dirt will build-up on the emitter pins and upon the body of the ioniser. This will cause a reduction in performance.

Typically, weekly cleaning is sufficient. However, equipment used in some heavy contamination areas, such as gravure printing or where plastic fumes are present, may require daily cleaning. Equally, in a Class 100 area, cleaning may only be required on a monthly basis.

Before cleaning, ensure that the equipment is switched off.

Emitter pins can be cleaned very effectively with a brush. A dry toothbrush is ideal.



Ionising bars will need periodic wiping to clean grey deposits from the surface of the bar. A cloth moistened with a small amount of IPA or methylated spirits is recommended.



Should you have any additional questions regarding the maintenance of Meech equipment please contact Meech International directly or your local Meech distributor.

Fault Finding

Tests must be completed by a qualified electrical engineer.

If in doubt contact Meech head office or your local distributor.

CAUTION: Whilst no danger to personnel exists, it is essential than any high voltage ionising equipment, (exception Meech Model 910 Water Resistant Ionising Bars), make no contact with water or water based fluids. Should such an event occur, disconnect immediately and return equipment to the manufacturer for water damage assessment. High voltage electrical equipment should not make contact with water.

The model 910 ionising bar forms part of a system, comprising of itself and a Model 904 power supply. (See fig 1)

To verify where a fault may have occurred it is important to test each item of the system individually. Should more than one ionising appliance be connected to one power supply, these must be tested individually.

To check the model 910 ionising bar follow the procedure detailed below.

1. Switch off the electrical supply to the system.
2. Disconnect all ionising appliances from the power supply.
3. Follow the test procedure for the model 904 power supply. This can be found in the instruction manual of the model 904.
4. Having checked the power supply reconnect one ionising model 910 ionising bar.
5. Using a high voltage probe (RS 610 281) and meter (RS 610 590) measure the voltage on the pins of the ionising bar. This voltage should be approximately 2.7 kV.
6. If the voltage is below 2.0 kV then the item should be returned to Meech for service and or repair.
7. If no meter and probe is available, then a fast and simple test is to simply short the pin of the ionising bar to earth using a screwdriver as follows.
 - Place the shaft of the screwdriver against the aluminium extrusion of the ionising bar.

- Approach the pin of the bar with the point of the screwdriver. As the screwdriver approaches the pin, a small faint spark should jump from the pin to the screwdriver. If The bar is under direct sunlight or bright lights it may be difficult to see this spark.
 - As the spark is drawn a slight buzzing sound will also be heard. This would indicate the bar is functioning correctly.
8. If there is more than one appliance to test, disconnect the first item and repeat the above steps.

Repairs and Warranty

The Meech 910 Bar is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the Ioniser directly to us. All products returned to the factory MUST be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the Ioniser to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.

CE Approval

An EC Declaration of Conformity for this product exists in respect of the Low Voltage Directive:72/23/EEC (“LVD”) & Electromagnetic Compatibility Directive: 89/336/EEC (“EMCD”)



Health and Safety

Emission of Ozone: Considerably below international standard of 0.1ppm.



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